ACKNOWLEDGEMENT

First and foremost, I wish to express my deep sense of gratitude to my thesis supervisor Dr.P.Eswar for encouraging me to work on this topic. His keen mind and analytical abilities have helped me immensely in refining many of the ideas put forth in this thesis. Not only that, he has been available whenever I needed him. Thanks, Dr.Eswar, for everything!

Late Dr.A.Balasubramaniam, Assistant Professor, School of Computer Science and Engineering spent a lot of time with me brainstorming the proposed approach to minimize regression test effort. Though he is not materially present, his thoughts and ideas are continuing to shape the way I think. Much appreciation is due to Mr.Arul Siromoney, Lecturer, for the many insightful comments on the draft of the thesis. Special thanks to T.Ashok of Verifone India Ltd., Bangalore, who collaborated with me on my initial work in atomic changes and has been a testing ground for many of my ideas.

My colleagues at Man Machine Systems deserve special mention. Krishnan has been of tremendous help by implementing certain key ideas. Credit goes to him for his contributions to JRegCheck, the regression test analysis tool that embodies the ideas described in this thesis. Srinivasan’s wizardry with Microsoft tools has been largely responsible for the final form of this thesis. In general, Man Machine Systems has been a fertile ground for innovative ideas in software engineering, ably demonstrated by some of the other tools such as JStyle and JVerify.

Finally, this work would not have been made possible but for my dearest family which has been an undrying fountain of encouragement, love and affection throughout.

(KRANGARAJAN)